

STIC Search Report

STIC Database Tracking Number: 182022

TO: Helen Pezzuto Location: REM 10A29

Art Unit: 1713 March 14, 2006

Case Serial Number: 10776739

From: Kathleen Fuller Location: EIC 1700 REMSEN 4B28

Phone: 571/272-2505

Kathleen.Fuller@uspto.gov

Search Notes

REFERENCES FROM THE 19 COMPOUNDS. THAT'S ALL THERE IS.

ONLY 19 COMPOUNDS FROM THE QUERY COVERING ALL CLAIMS STRUCTURES AND 8 CA



I JASK GIVE KEGUEST TO MIS. K. FULLER. Access DB# 182622 FIC REFERENCE BR SEARCH REQUEST FORM Sci P Tech Int . Cn Scientific and Technical Information Center MAR 1 5 HELL 12747 © Examiner #: 1005 Date: 3/10/06
30-0-1/08 Serial Number: 10/11/6, 739 Requestar & Fill Name: Ht LEN Phone Number 30-2-1108 Mail Box and Bldg/Room Location: REM-10A29 Results Format Preferred (circle): PAPER DISK E-MAIL If more than one search is submitted, please prioritize searches in order of need. Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract. SCIENTIFIC REFERENCE BR LEE ATTACHED Sci 2 rech Inf - Cnt Title of Invention: _ Inventors (please provide full names): MAR 1 U RECIJ Pat. & T.M. Office 02/11/04 Earliest Priority Filing Date: ___ *For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the (1) Please sench OH/Si centaining (meth) onytam appropriate serial number. compound in el 1 Selective splaiss one expressed in els 5-6 \(27\) (2) Pleme seach 3-component palymer derineg from monomer defined in el 1. (3) A "blend" of the pulmer with other permits performers (cls 21-23) if time permits

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: K. Fuller	NA Sequence (#)	STN
Searcher Phone #:	AA Sequence (t:)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 3/14/06	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fülltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 28	Other	Other (specify)
Onnie Time.		

=> FILE REG

FILE 'REGISTRY' ENTERED AT 15:14:34 ON 14 MAR 2006
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STRUCTURE FILE UPDATES: 13 MAR 2006 HIGHEST RN 876655-59-3
DICTIONARY FILE UPDATES: 13 MAR 2006 HIGHEST RN 876655-59-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

* The CA roles and document type information have been removed from *

* the IDE default display format and the ED field has been added, *

* effective March 20, 2005. A new display format, IDERL, is now *

* available and contains the CA role and document type information. *

*

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http://www.cas.org/ONLINE/UG/regprops.html

=> FILE HCAPL

FILE 'HCAPLUS' ENTERED AT 15:14:39 ON 14 MAR 2006
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FILE COVERS 1907 - 14 Mar 2006 VOL 144 ISS 12 FILE LAST UPDATED: 13 Mar 2006 (20060313/ED)

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PRAI US 2004-776739 Α 20040211

The (meth)acrylamide monomers have formula CH2:CRCONR1CH2C(OH)CH2O(CH2)3Si R2R3R4, R = H or Me, R1 = H, substituted and unsubstituted alkyl groups

having 1-8 C atoms, substituted and unsubstituted benzene and toluene groups and MeC(OH)CH2O(CH2)3SiR2R3R4 and R2-4 = alkyl groups having 1-8 C atoms, substituted and unsubstituted benzene and toluene groups, and -OSiR5R6R7 where R5, R6 and R7 = straight or branched alkyl groups having 1-4 C atoms. Polymers that are clear and useful for contact lens material are also disclosed.

ICM C08G077-00

INCL 528032000; 528033000; 528034000; 528038000

35-2 (Chemistry of Synthetic High Polymers) Section cross-reference(s): 37, 38

alkyl silylpropenoxy methacrylamide monomer; hydroxy methacrylamide ST monomer

IT Contact lenses

> ((meth)acrylamide monomers containing hydroxy and silicone functionalities: for)

IT Polyoxyalkylenes, uses

ing the second of the second o RL: POF (Polymer in formulation); USES (Uses) ((meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT Polyesters, uses

(-0 }, RL: POF (Polymer in formulation); USES (Uses) (lactone-based, wetting agent; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT

RL: POF (Polymer in formulation); USES (Uses) (polymers, wetting agent; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

Polyamides, uses IT

Polyimides, uses

Polysaccharides, uses

RL: POF (Polymer in formulation); USES (Uses)

(wetting agent; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT **95773-74-3P 862097-69-6P** 862097-70-9P 862097-71-0P 862097-72-1P 862097-73-2P 862097-74-3P 862097-75-4P 862097-76-5P

862097-77-6P 862097-78-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

((meth)acrylamide monomers containing hydroxy and silicone functionalities... for polymers for contact lenses)

.. -

862097-67-4P IT

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

((meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 106-92-3, Allyl glycidyl ether 920-46-7, Methacryloyl chloride 1873-89-8, Tris(trimethylsiloxy)silane 7422-52-8, (3-Glycidoxypropyl)bis(trimethylsiloxy)methylsilane 7664-41-7, Ammonia, reactions 29681-57-0, tert-Butyldimethylsilane 45469-02-1, Allyloxyoxirane

RL: RCT (Reactant); RACT (Reactant or reagent)

((meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 862097-66-3P

> RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(contact lens material; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 6967-44-8P 862097-68-5P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

```
(Reactant or reagent)
```

' PEZZUTTO

(intermediate; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 862097-64-1P 862097-65-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation and polymerization; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-39-8,

Poly-N-vinylpyrrolidone 9005-49-6, Heparin, uses 25189-83-7

25232-42-2, Polyvinylimidazole 25322-68-3, Polyethylene oxide

25805-17-8, Poly 2 ethyloxazoline 26587-22-4 26793-34-0,

Poly-N-N-dimethylacrylamide 107313-86-0 113970-15-3 502507-57-5

502507-59-7 502507-61-1 502507-63-3

RL: POF (Polymer in formulation); USES (Uses)

(wetting agent; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

IT 95773-74-3P 862097-69-6P 862097-71-0P

862097-72-1P 862097-73-2P 862097-74-3P

862097-75-4P 862097-76-5P 862097-77-6P

862097-78-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

((meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

RN 95773-74-3 HCAPLUS

CN 2-Propenamide, N-[2-hydroxy-3-[3-[3,3,3-trimethyl-1,1-]] bis[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]-2-methyl- (9CI) (CA INDEX NAME)

RN 862097-69-6 HCAPLUS

CN 2-Propenamide, N-[3-[3-[(1,1-dimethylethyl)dimethylsilyl]propoxy]-2-hydroxypropyl]-2-methyl- (9CI) (CA INDEX NAME)

RN 862097-71-0 HCAPLUS

CN 2-Propenamide, N-[2-hydroxy-3-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]- (9CI) (CA INDEX NAME)

RN 862097-72-1 HCAPLUS

CN 2-Propenamide, N,N-bis[2-hydroxy-3-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]- (9CI) (CA INDEX NAME)

RN 862097-73-2 HCAPLUS

CN 2-Propenamide, N-[2-hydroxy-3-[3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]- (9CI) (CA INDEX NAME)

RN 862097-74-3 HCAPLUS

CN 2-Propenamide, N,N-bis[2-hydroxy-3-[3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]-2-methyl- (9CI) (CA INDEX NAME)

RN 862097-75-4 HCAPLUS

CN 2-Propenamide, N,N-bis[2-hydroxy-3-[3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]- (9CI) (CA INDEX NAME)

RN 862097-76-5 HCAPLUS

CN 2-Propenamide, N-[3-[3-[(1,1-dimethylethyl)dimethylsilyl]propoxy]-2-hydroxypropyl]- (9CI) (CA INDEX NAME)

RN 862097-77-6 HCAPLUS

CN 2-Propenamide, N,N-bis[3-[3-[(1,1-dimethylethyl)dimethylsilyl]propoxy]-2-hydroxypropyl]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-B

-Bu-t

RN 862097-78-7 HCAPLUS

CN 2-Propenamide, N,N-bis[3-[3-[(1,1-dimethylethyl)dimethylsilyl]propoxy]-2-hydroxypropyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

- Bu-t

CN

IT 862097-66-3P

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological

study); PREP (Preparation); USES (Uses)
(contact lens material; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

862097-66-3 HCAPLUS RN

2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with N, N-bis [2-hydroxy-3-[3-[1,3,3,3-tetramethyl-1-

[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]-2-methyl-2-propenamide, N, N-dimethyl-2-propenamide and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 862097-65-2

CMF C30 H71 N O9 Si6

PAGE 1-A

PAGE 1-B

-SiMe $_3$

-SiMe $_3$

CM 2

CRN 2680-03-7 CMF C5 H9 N O

$$\begin{array}{c} \text{O} \\ || \\ \text{Me}_2 \text{N-C-CH----} \text{CH}_2 \end{array}$$

CM 3

CRN 868-77-9 CMF C6 H10 O3

CM 4

CRN 97-90-5 CMF C10 H14 O4

IT 862097-64-1P 862097-65-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation and polymerization; (meth)acrylamide monomers containing hydroxy and silicone functionalities for polymers for contact lenses)

RN 862097-64-1 HCAPLUS

CN 2-Propenamide, N-[2-hydroxy-3-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]-2-methyl- (9CI) (CFINDEX NAME)

RN 862097-65-2 HCAPLUS

CN 2-Propenamide, N,N-bis[2-hydroxy-3-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]propyl]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

-SiMe3

-SiMe $_3$

L7 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ΑN 1993:193735 HCAPLUS

Correction of: 1992:552887

DN 118:193735

Correction of: 117:152887

TI One-component low-temperature-curable resin compositions

Kasa, Toshiaki; Igarashi, Hiroshi; Ozaki, Toru; Adachi, Yoriyuki; Osumi, Motohiro; Matoba, Takao; Kodama, Shunichi; Watanabe, Tadashi Kansai Paint Co., Ltd., Japan Jpn. Kokai Tokkyo Koho, 12 pp. IN

PA

SO

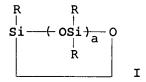
CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

FAN.CNI I				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04103668	A2	19920406	JP 1990-221624	19900823
JP 2948638	B2	19990913		
PRAI JP 1990-221624		19900823	·	
GI				



AB The title compns. for acid-, soiling-, and weather-resistant coatings comprise resins containing hydroxysilyl and/or Si-bonded hydrolyzable group, epoxy, OH, and SiR3 and/or cyclic siloxanyl group I (R = C1-8 alkyl, aryl, aralkyl, OSiR13; R1 = C1-8 alkyl, aryl, aralkyl; a ≥2) and

crosslinking catalysts. Thus, 3,4-epoxycyclohexylmethyl acrylate 30, γ-methacryloyloxypropyltrimethoxysilane 20, 2-hydroxyethyl acrylate 15, CH2:CMeCO2C3H6Si(OSiMe3)3 30, styrene 10, and Bu methacrylate 15 parts were polymerized in PhMe-BuOH in presence of AIBN to give a copolymer, 200 parts of which was blended with tris(propylacetoacetonato)aluminum 2, and CR 95 60 parts. A cured coating prepared from the composition showed DuPont impact strength >50 cm and no change when immersed in 40% aqueous H2SO4 for 8 h or after 3000-h weathering.

IC ICM C08L101-10

ICS C08L063-00; C08L101-06; C09D201-06; C09D201-10; C09J201-06; C09J201-10

CC 42-10 (Coatings, Inks, and Related Products)

ST acid resistance coating silyl polyacrylate; weatherability coating silyl polyacrylate; antisoiling coating silyl polyacrylate; siloxane polyacrylate coating

IT Siloxanes and Silicones, uses

RL: TEM (Technical or engineered material use); USES (Uses) (coatings, acid-, soiling-, and weather-resistant)

IT Coating materials

(acid- and weather-resistant, antisoiling, epoxy- and hydroxy- and silyl-containing polymers)

IT 13963-57-0, Tris(acetylacetonato)aluminum 15556-37-3 114055-92-4 RL: CAT (Catalyst use); USES (Uses)

(crosslinking catalysts, for epoxy- and hydroxy- and silyl-containing polymers, antisoiling acid- and weather-resistant coatings from)

97-88-1DP, Butyl methacrylate, polymers with siloxanes 2478-10-6DP, polymers with siloxanes 64630-63-3DP, polymers with siloxanes 131826-38-5DP, reaction products with silyl-containing isocyanates 143090-85-1P 143090-86-2P 143090-88-4P 143111-83-5DP, reaction products with hydroxy-containing polyacrylates 143113-68-2P RL: PREP (Preparation)

(preparation of, coatings, antisoiling, acid- and weather-resistant)

IT 143090-86-2P

IT

RL: PREP (Preparation)

(preparation of, coatings, antisoiling, acid- and weather-resistant)

RN 143090-86-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene, 2-hydroxyethyl 2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate, 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]pr opyl (2-methyl-1-oxo-2-propenyl)carbamate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 115887-15-5 CMF C15 H33 N O5 Si3

CM 2

CRN 64630-63-3 CMF C10 H14 O3

$$\begin{array}{c} O \\ \parallel \\ O \\ \end{array}$$

CM 3

CRN 2530-85-0 CMF C10 H20 O5 Si

$$\begin{array}{c|c} ^{H_2C} & \text{O} & \text{OMe} \\ \parallel & \parallel & \parallel & \parallel \\ \text{Me-} & \text{C-} & \text{C-} & \text{O-} & \text{(CH}_2)_3 - \text{Si-} & \text{OMe} \\ \parallel & \parallel & \parallel & \parallel & \parallel \\ \text{OMe} & & \parallel & \parallel \\ \end{array}$$

CM 4

CRN 818-61-1 CMF C5 H8 O3

CM 5

CRN 100-42-5 CMF C8 H8

 $H_2C = CH - Ph$

CM 6

CRN 97-88-1 CMF C8 H14 O2

$$\begin{array}{c|c} \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{n-BuO-} \text{C-} \text{C-} \text{Me} \end{array}$$

L7 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

```
1992:552887 HCAPLUS
AN
     117:152887
DN
     One-component low-temperature-curable resin compositions
TI
     Kasa, Toshiaki; Igarashi, Hiroshi; Ozaki, Toru; Adachi, Yoriyuki; Osumi,
IN
     Motohiro; Matoba, Takao; Kodama, Shunichi; Watanabe, Tadashi
     Kansai Paint K. K., Japan
PA
     Jpn. Kokai Tokkyo Koho, 12 pp.
so
     CODEN: JKXXAF
DT
     Patent
LΑ
     Japanese
                                          APPLICATION NO.
     PATENT NO.
                        KIND
                              DATE
                                           -----
                                                                  -----
                        ----
                               19920406 JP 1990-221624 19900823
PΙ
     JP 04103668 A2
     The title compns. for acid-, soiling-, and weather-resistant coatings
AB
     comprise resins containing hydroxysilyl and/or Si-bonded hydrolyzable group,
     epoxy, OH, and SiR3 and/or cyclic siloxanyl group I (R = C1-8 alkyl, aryl,
     aralkyl, OSiR13; R1 = C1-8 alkyl, aryl, aralkyl; a ≥2) and
     crosslinking catalysts. Thus, 3,4-epoxycyclohexylmethyl acrylate 30,
    γ-methacryloxypropyltrimethoxysilane 20, 2-hydroxyethyl acrylate 15, CH2:CMeCO2C3H6Si(OSiMe3)3 10, styrene 10, and Bu methacrylate 15 parts
     were polymerized in PhMe-BuOH in presence of AIBN to give a copolymer, 200
     parts of which was blended with tris(n-propylacetoacetato)aluminum 2, and
     CR 95 60 parts to give title composition A coating prepared from the composition by
     spraying, drying, and curing at 80° showed DuPont impact strength
     >50 cm and no change when immersed in 40% aqueous H2SO4 for 8 h or after
     3000-h weathering.
IC
     ICM C08L101-10
     ICS C08L063-00; C08L101-06; C09D201-06; C09D201-10; C09J201-06;
         C09J201-10
     42-10 (Coatings, Inks, and Related Products)
CC
     acid resistance coating silyl polyacrylate; weatherability coating silyl
     polyacrylate; antisoiling coating silyl polyacrylate; siloxane
     polyacrylate coating
IT
     Coating materials
        (acid-resistant, antisoiling, epoxy- and hydroxy- and silyl-containing
       polymers, with good weatherability)
IT
     Siloxanes and Silicones, uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (coatings, antisoiling, acid-resistant, with good weatherability)
     13963-57-0, Tris(acetylacetonato)aluminum 15556-37-3 114055-92-4
IT
     RL: CAT (Catalyst use); USES (Uses)
        (crosslinking catalysts, for epoxy- and hydroxy- and silyl-containing
       polymers, antisoiling acid- and weather-resistant coatings from)
     97-88-1DP, polymers with siloxanes 2478-10-6DP, polymers with siloxanes
IT
     64630-63-3DP, polymers with siloxanes 131826-38-5DP, reaction products
     with silyl-containing isocyanates 143090-85-1P 143090-86-2P
     143090-88-4P 143111-83-5DP, reaction products with hydroxy-containing
    polyacrylates
                   143113-68-2P
     RL: PREP (Preparation)
        (preparation of, coatings, antisoiling, acid-resistant, with good
       weatherability)
IT
     143090-86-2P
    RL: PREP (Preparation)
        (preparation of, coatings, antisoiling, acid-resistant, with good
       weatherability)
RN
    143090-86-2 HCAPLUS
     2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene,
CN
     2-hydroxyethyl 2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl
```

2-propenoate, 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl (2-methyl-1-oxo-2-propenyl)carbamate and 3-(trimethoxysilyl)propyl

CM 1

CRN 115887-15-5 CMF C15 H33 N O5 Si3

Me₃Si-O

CM 2

CRN 64630-63-3 CMF C10 H14 O3

CM 3

CRN 2530-85-0 CMF C10 H20 O5 Si

$$\begin{array}{c|c} ^{H_2C} & \text{O} & \text{OMe} \\ \parallel & \parallel & \parallel \\ \text{Me-C-C-O-(CH}_2)_3 - \text{Si-OMe} \\ \parallel & \parallel \\ \text{OMe} \end{array}$$

CM 4

CRN 818-61-1 CMF C5 H8 O3

$$\begin{array}{c} \text{O} \\ || \\ \text{HO- CH}_2^- - \text{CH}_2^- - \text{O- C- CH} \end{array} \\ \text{CH}_2$$

CM 5

CRN 100-42-5

CMF C8 H8

 $H_2C = CH - Ph$

CM 6

CRN 97-88-1 CMF C8 H14 O2

 $\begin{array}{c|c} \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{n-BuO-C-C-Me} \end{array}$

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L7 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
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AN 1991:248002 HCAPLUS

DN 114:248002

TI Vinyl polymer containing silicon and preparation thereof

IN Ohsugi, Hiroharu; Eguchi, Yoshio; Urano, Satoshi; Mizuguchi, Ryuzo

PA Nippon Paint Co., Ltd., Japan

SO U.S., 9 pp. Cont. of U.S. Ser. No. 135,301, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI US 4980442	Α	19901225	US 1990-462910	1.	19900110
CA 1301992	A1	19920526	CA 1987-554860	;	19871218
PRAI US 1987-135301	B1	19871221			

GI For diagram(s), see printed CA Issue.

AB A Si-containing vinyl polymer comprise I unit [R2 = -CH2CR3(ANHXR4-)-, where -ANHXR4- is a pendant portion of the main chain; A = direct bond, -CO2R5-, -CO-, -CONHR6-, (un) substituted phenylene; X = R5; each R6 = alkylene; R3 = H or Me; R4 = (un) substituted alkylene directly bonded to Si; Y = R2, C1-6 alkyl or alkenyl; n = pos. integer ≥2] and ≥1 α,β-ethylenic monomer. Thus, charging xylene 100 and II [prepared from 1,3,5,7-tetramethyl-3,5,7-tripropyl-1-(γ-hydroxypropyl) cyclotetrasiloxane and methacryloyl isocyanate] 40 parts under N, heating to 90°, adding Me methacrylate 100, Bu acrylate 60, and AIBN 3 parts dropwise in 3 h, heating at 90° for 0.5 h, adding dropwise a mixture of tert-Bu 2-ethylperhexanoate 1 and xylene 10 parts, and keeping at 90° for 5 h gave a resinous solution, which was purified by a C6H6-MeOH method to give a polymer having number-average mol. weight 10,000 and weight-average mol. weight 59300.

IC ICM C08G077-04

INCL 528028000

CC 35-4 (Chemistry of Synthetic High Polymers)

ST silicon contg vinyl polymer; acrylate contg silicon polymer; siloxane side chain copolymer

IT Polymerization catalysts

(co-, peroxides, for methacrylates containing oligomeric siloxane side chains)

IT 3006-82-4, tert-Butylperoxy-2-ethylhexanoate RL: CAT (Catalyst use); USES (Uses)

```
(catalyst, for polymerization of alkyl (meth) acrylates with methacrylates
        containing oligomeric siloxane side chains)
IT
     115887-15-5P
                    116200-10-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and copolymn. of, with ethylenic monomers)
IT
     115887-16-6P
     RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
        (preparation and polymerization of, with isocyanatoethyl methacrylate)
IT
     108065-54-9DP, reaction products with tetramethyltripropyl(hydroxypropyl)c
     yclotetrasiloxane 115887-14-4DP, reaction products with
     isocyanate-containing methacrylate copolymers 116695-11-5P
     116745-55-2P 124634-55-5P 124634-56-6P
     RL: PREP (Preparation)
        (preparation of)
IT
     17962-67-3
                  115887-14-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with methacryloyl isocyanate)
     4474-60-6, Methacryloylisocyanate 30674-80-7, 2-Isocyanato ethyl
IT
     methacrylate
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with tetramethyltripropyl(hydroxypropyl)cyclotetrasiloxan
IT
     115887-15-5P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and copolymn. of, with ethylenic monomers)
RN
     115887-15-5 HCAPLUS
     Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, 3-[1,3,3,3-tetramethyl-1-
     [(trimethylsilyl)oxy]disiloxanyl]propyl ester (9CI) (CA INDEX NAME)
Me<sub>3</sub>Si-0
                             CH<sub>2</sub>
  Me-Si-(CH_2)_3-O-C-NH-C-C-Me
Me<sub>3</sub>Si-0
IT
     116695-11-5P
     RL: PREP (Preparation)
        (preparation of)
RN
     116695-11-5 HCAPLUS
CN
     2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl
     2-propenoate and 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl
     ]propyl (2-methyl-1-oxo-2-propenyl)carbamate (9CI) (CA INDEX NAME)
     CM
          115887-15-5
     CRN
         C15 H33 N O5 Si3
```

CM 2

CRN 103-11-7 CMF C11 H20 O2

CM 3

CRN 80-62-6 CMF C5 H8 O2

L7 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:36751 HCAPLUS

DN 112:36751

TI Preparation of vinyl polymers containing silicones

IN Ohsugi, Hiroharu; Eguchi, Yoshio; Urano, Satoshi; Mizuguchi, Ryuzo

PA Nippon Paint Co., Ltd., Japan

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

L MIA.	CNII			•		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 320537	A1	19890621	EP 1987-202584	19871218	
	EP 320537	B1	19930804			
	R: DE, GB					
PRAI	EP 1987-202584		19871218			

Polymers useful in lenses, moldings, coatings, etc. are prepared by polymerizing reaction products of (meth)acrylic isocyanates with Si compds. containing active H. Adding 1,3,5,7-tetramethyl-3,5,7-tripropyl-1-(3-hydroxypropyl)cyclotetrasiloxane in AcOBu dropwise to methacryloyl isocyanate and stirring at room temperature for 3 h and 50°/5 mm for 1 h gave a urethane (I). AIBN-catalyzed polymerization of I 40, Me methacrylate 100, and Bu acrylate 60 parts and crosslinking with a peroxide gave a resin with number-average mol. weight 10,100 and weight-average mol. weight 59,300.

IC ICM C08F008-42

ICS C08F230-08

CC 35-4 (Chemistry of Synthetic High Polymers)

ST cyclosiloxane urethane methacrylate copolymer; acrylate copolymer cyclosiloxane methacrylate

IT 108065-54-9DP, reaction products with tetramethyltripropyl(hydroxypropyl)c
 yclotetrasiloxane 116695-11-5P 116745-55-2P 124634-55-5P
 124634-56-6P

RL: PREP (Preparation)

(manufacture of crosslinked)

2-propenoate and 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl (2-methyl-1-oxo-2-propenyl)carbamate (9CI) (CA INDEX NAME)

CM

115887-15-5 CRN CMF C15 H33 N O5 Si3

CM

CRN 103-11-7 CMF C11 H20 O2

$$\begin{array}{c} \circ \\ || \\ \mathsf{CH}_2 - \mathsf{O} - \mathsf{C} - \mathsf{CH} == \mathsf{CH}_2 \\ || \\ \mathsf{Et} - \mathsf{CH} - \mathsf{Bu} - \mathsf{n} \end{array}$$

3 CM

CRN 80-62-6 CMF C5 H8 O2

IT 115887-15-5P

> RL: PREP (Preparation) (preparation of)

RN 115887-15-5 HCAPLUS

CN Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl ester (9CI) (CA INDEX NAME)

PEZZUTTO

```
Me<sub>3</sub>Si-0
  Me-Si-(CH_2)_3-O-C-NH-C-C-Me
Me<sub>3</sub>Si-0
L7
     ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
AN
     1988:550262 HCAPLUS
DN
     109:150262
ΤI
     Silicon-containing vinyl polymers
IN
     Osugi, Koji; Eguchi, Yoshio; Urano, Satoru; Mizuguchi, Ryuzo
PA
     Nippon Paint Co., Ltd., Japan
SO
     Jpn. Kokai Tokkyo Koho, 9 pp.
     CODEN: JKXXAF
DT
     Patent
     Japanese
LA
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                         _ _ _ _
PΙ
     JP 63000303
                          A2
                                19880105
                                            JP 1986-143826
                                                                    19860619
     JP 06055796
                          B4
                                19940727
PRAI JP 1986-143826
                                19860619
     The title polymers were prepared containing ≥1 R1mR2nSiO(4-m-n)/2 unit
     (R1 = (un)substituted hydrocarbyl; R2 = -CH2CR3ANHBR4-; R3 = H, Me; R4 =
     alkylene optionally containing Si-bonded substituent or heteroatom; (m + n) =
     2-4; A = direct bond, -CO2R5-, CO, -CONHR6-, (un) substituted phenylene; B
     = CO2, CONH; R5, R6 = alkylene; when A = -CO2R5-, (m + n) = 2]. A mixture
     of 100 parts xylene and 40 parts 1-[3-(methacrylamidocarbonyloxy)propyl]-
     1,3,5,7-tetramethyl-3,5,7-tripropylcyclotetrasiloxane (I) at 90°
     under N was treated over 3 h with a mixture of Me methacrylate 100, Bu
     acrylate 60, and AIBN 3.0 parts, heated at the same temperature for 30 min,
     treated over 1 h with a mixture of 1 part tert-Bu 2-ethylperhexanoate and 10
     parts xylene, and further polymerized at 90° for 5 h to give a polymer
     (18.4% I) with number-average mol. weight 10,100 and weight-average mol. weight 59,300.
IC
     ICM C08F030-08
CC
     35-4 (Chemistry of Synthetic High Polymers)
ST
     silicon acrylic polymer
IT
     Polymerization
        (radical, of acrylic compds. and vinylsiloxanes)
IT
     115887-15-5P 115887-16-6P 116200-10-3P
     RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
     (Reactant or reagent)
        (manufacture and polymerization of)
IT
     116695-09-1P
                  116695-10-4P 116695-11-5P
                                                116745-55-2P
     RL: PREP (Preparation)
        (preparation of)
IT
     4474-60-6, Methacryloyl isocyanate 30674-80-7, 2-Isocyanatoethyl
     methacrylate
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with hydroxy group-containing siloxanes)
IT
     17962-67-3 115887-14-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with methacryloyl isocyanate)
IT
     115887-15-5P
```

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(manufacture and polymerization of)

RN 115887-15-5 HCAPLUS

CN Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl ester (9CI) (CA INDEX NAME)

Me₃Si-O

IT 116695-11-5P

RL: PREP (Preparation) (preparation of)

RN 116695-11-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate and 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl propyl (2-methyl-1-oxo-2-propenyl)carbamate (9CI) (CA INDEX NAME)

CM 1

CRN 115887-15-5 CMF C15 H33 N O5 Si3

CM 2

CRN 103-11-7 CMF C11 H20 O2

$$\begin{array}{c} \mathsf{O} \\ || \\ \mathsf{CH}_2 - \mathsf{O} - \mathsf{C} - \mathsf{CH} == \mathsf{CH}_2 \\ || \\ \mathsf{Et} - \mathsf{CH} - \mathsf{Bu} - \mathsf{n} \end{array}$$

CM 3

CRN 80-62-6 CMF C5 H8 O2

115887-18-8P

IT

```
ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
L7
     1988:511052 HCAPLUS
AN
DN
     109:111052
     Silicon-containing polymerizable monomers and their manufacture
ΤI
     Osugi, Koji; Eguchi, Yoshio; Urano, Satoru; Mizuguchi, Ryuzo; Takarada,
IN
     Mitsuhiro
PA
     Nippon Paint Co., Ltd., Japan; Shin-Etsu Chemical Industry Co., Ltd.
     Jpn. Kokai Tokkyo Koho, 7 pp.
SO
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                         ----
                                 -----
ΡI
     JP 62298595
                          A2
                                 19871225
                                             JP 1986-143825
                                                                     19860619
     JP 06031267
                          B4
                                 19940427
     US 4888406
                                 19891219
                                             US 1987-135302
                          Α
PRAI JP 1986-143825
                                 19860619
os
     CASREACT 109:111052
AB
     The monomers Rlm(CH2:CR3ANHZR2)nSiO4-m-n (R1 = hydrocarbyl; R2 = Si-bonded
     (hetero)alkylene; m, n \ge 0, 2 \le m + n \le 4; R3 = H, Me;
     A = CO2R4, CO, CONHR5, Ph; Z = CO2, CONH; R4,R5 = alkylene; when A =
     CO2R4, m + n = 2) are prepared by reacting OH-containing organic Si compds.
     Rlm(HOR3) nSiO4-m-n/2 with \alpha, b-unsatd. isocyanates CH2:CR3(ANCO) or
     with haloethyl-containing isocyanates YCH2CHR3(ANCO) (Y = halogen) and
     dehydrohalogenating. Thus, dropwise addition of 11 parts methacryloyl
     isocyanate to a mixture of 60 parts BuOAc and 424 parts 1,3,5,7-tetramethyl-
     3,5,7-tripropyl-1-(r-hydroxy propyl)cyclotetrasiloxane over 0.5 h,
     reaction for 3 h, and concentrating at 50° for 1 h gave a transparent
     compound with n 1.4540 and viscosity 180 cP.
IC
     ICM C07F007-18
ICA
     C08G077-26
CC
     35-2 (Chemistry of Synthetic High Polymers)
ST
     acrylic silicone monomer; condensation hydroxy silicone compd
     methacryloylisocyanate; haloisocyanate hydroxy silicone compd
     condensation; dehydrohalogenation halocarbamatosilicone acrylic silicone
     manuf
IT
     Dehydrohalogenation
        (of halocarbamato siloxanes, for manufacture of (meth) acrylate siloxanes)
IT
     Siloxanes and Silicones, preparation
     RL: PREP (Preparation)
        (acrylate-, preparation of, from hydroxy-containing silicones and (meth)acrylic
        isocyanates or haloisocyanates)
     Siloxanes and Silicones, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
IT
        (hydroxy-containing, condensation of, with \alpha, \beta-unsatd.
        isocyanates or haloisocyanates)
     4474-60-6 5843-41-4 24223-95-8, β-Chloropropionyl isocyanate 30674-80-7, 2-Isocyanatoethyl methacrylate
IT
     RL: USES (Uses)
        (condensation of, with hydroxy-containing organic silicone compds.)
IT
     3219-63-4 17962-67-3 115887-14-4
     RL: USES (Uses)
        (condensation of, with \alpha, \beta-unsatd. isocyanates)
IT
     115887-15-5P 115887-16-6P 115887-17-7P
```

115887-19-9P 116200-10-3P RL: IMF (Industrial manufacture); PREP (Preparation)

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of, polymerizable monomers)

115887-15-5P 115887-17-7P 115887-18-8P

(manufacture of, polymerizable monomers)

RN 115887-15-5 HCAPLUS

CN Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, 3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl ester (9CI) (CA INDEX NAME)

RN 115887-17-7 HCAPLUS

CN Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, (trimethylsilyl)methyl ester (9CI) (CA INDEX NAME)

RN 115887-18-8 HCAPLUS

CN Carbamic acid, (1-oxo-2-propenyl)-, (trimethylsilyl)methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & \text{O} & \text{O} \\ || & & || \\ \text{Me}_3 \text{Si} - \text{CH}_2 - \text{O} - \text{C} - \text{NH} - \text{C} - \text{CH} = \text{CH}_2 \end{array}$$

L7 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1985:150325 HCAPLUS

DN 102:150325

TI A composite polymeric material comprising vinyl chloride and organosilicon moieties

アン・アン・ディー あんりょう かんりょう

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Eur. Pat. Appl., 38 pp. CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PAN.	-IN I	T										
	PATENT NO.					KIND		DATE	. API	PLICATION NO.	•	DATE
			- <i></i> -				-					
PI	ΕP	1319	11			A1		19850123	EP	1984-108166		19840712
		R:	BE,	DE,	FR,	GB,	NL					
	JP	6002	0910			A2		19850202	JP	1983-128932		19830715
	JP	0300	3684			B4		19910121				
	JР	6016	3908			A2		19850826	JP	1984-20349		19840207
	JP	0400	4322			B4		19920128				
	NO	8402	664			Α		19850116	NO	1984-2664		19840702
	NO	1663	71			В		19910402				
	NO	1663	71			C		19910710				
	US	4665	145			Α		19870512	US	1984-627743		19840705
PRAI	JΡ	1983	-1289	932		Α		19830715				

```
PEZZUTTO
           10/776739
     JP 1984-20349
                           Α
AB
IC
     ICM C08L027-06
CC
ST
IT
     RL: USES (Uses)
IT
```

19840207 Vinyl chloride (I)-based composites free of plasticizer bleeding and with high O permeability contain 50-99 parts I moiety and 1-50 parts organosilicon moiety, and are prepared by copolymn. or graft polymerization Thus, 30 kg H2O, 12.75 kg I, 20 g saponified poly(vinyl alc.), 7.5 g di-2-ethylhexyl peroxydicarbonate, 2.14 kg CH2:CMeCO2(CH2)3Si(OSiMe3)3 (II), and 0.11 kg CH2:CMeCO2(CH2)3Si(OSiMe3)2OSi(OSiMe3)2(CH2)3O2CCMe:CH2 (III) were heated at 52° for 20 h to give I-II-III copolymer [95789-04-1] with 81.2% I. The copolymer (100 parts) containing 10 parts epoxidized soybean oil had O permeability 560 mL-mm/m2-atm-24 h.

ICS C08F214-06; C08F259-04; C08F275-00 37-3 (Plastics Manufacture and Processing)

vinyl chloride copolymer oxygen permeable; organosilicon chloroethene copolymer oxygen permeable; silylpropyl methacrylate vinyl chloride copolymer; plasticizer bleeding redn chloroethene copolymer

Siloxanes and Silicones, compounds

(polymers with vinyl chloride and vinyl monomers, with high oxygen permeability and low plasticizer bleeding)

80-62-6D, polymers with organosilicon compds. 108-05-4D, polymers with organosilicon compds. 111-34-2D, polymers with organosilicon compds. and vinyl acetate 95773-59-4 95773-61-8 95773-64-1D, polymers with Me methacrylate and organosilicon compds. 95773-78-7D, polymers with Bu vinyl ether, organosilicon compds., and vinyl acetate 95778-05-5D, polymers with Bu vinyl ether, organosilicon compds., and vinyl acetate 95789-08-5

RL: USES (Uses)

(PVC blends, with high oxygen permeability)

IT 556-70-7 2554-06-5 2627-95-4 32243-66-6 95778-05-5 95778-06-6 RL: USES (Uses)

> (blends with PVC and ethylene-vinyl acetate copolymers, with high oxygen permeability)

24937-78-8 IT

RL: USES (Uses)

(blends with PVC and organosilicon compds., with high oxygen permeability)

IT 9002-86-2

IT

RL: USES (Uses)

(blends with organosilicon polymers, with high oxygen permeability) 5356-84-3D, polymers with ethylhexyl methacrylate, organosiloxanes and vinyl chloride 59094-98-3D, polymers with ethylhexyl methacrylate, organosiloxanes and vinyl chloride 95789-07-4 95832-13-6 RL: USES (Uses)

(graft, with high oxygen permeability)

IT' 95789-03-0P 95832-08-9P

RL: PREP (Preparation)

(manufacture of, with high oxygen permeability)

IT 75-01-4DP, polymers with organosiloxanes 97-88-1DP, polymers with organosiloxanes and vinyl chloride 105-75-9DP, polymers with organosiloxanes and vinyl chloride 141-05-9DP, polymers with organosiloxanes and vinyl chloride 999-21-3DP, polymers with organosiloxanes and vinyl chloride 17096-07-0DP, polymers with vinyl chloride and organosiloxanes 94289-44-8P 95773-62-9P 95773-63-0P 95773-65-2P 95773-66-3P 95773-68-5P 95773-70-9P 95773-71-0P 95773-73-2P **95773-75-4P** 95773-77-6P 95773-79-8P 95773-81-2P 95773-82-3P 95773-84-5P 95773-85-6P 95778-04-4DP, polymers with diallyl maleate, organosiloxanes and vinyl chloride 95789-04-1P 95832-14-7P

```
PEZZUTTO
         (manufacture of, with high oxygen permeability and low plasticizer bleeding)
 IT
      7782-44-7, properties
      RL: PRP (Properties)
         (permeability to, of vinyl chloride polymers containing organosilicon
         moieties)
 IT
      117-81-7
      RL: MOA (Modifier or additive use); USES (Uses)
         (plasticizer, for vinyl chloride-organosilicone methacrylate
         copolymers, with high oxygen permeability)
IT
      95773-75-4P
      RL: PREP (Preparation)
         (manufacture of, with high oxygen permeability and low plasticizer bleeding)
 RN
      95773-75-4 HCAPLUS
CN
      2-Propenamide, N-[2-hydroxy-3-[3-[3,3,3-trimethyl-1,1---
      bis[(trimethylsily1)oxy]disiloxany1]propoxy]propy1]-2-methyl-, polymer
      with chloroethene (9CI) (CA INDEX NAME)
      CM
      CRN
          95773-74-3
          C19 H45 N O6 Si4
      CMF
                                          O CH<sub>2</sub>
  Me<sub>3</sub>Si-0
Me_3Si-O-Si-(CH_2)_3-O-CH_2-CH-CH_2-NH-C-C-Me^2
    Me_3Si-O
```

CRN 75-01-4 CMF C2 H3 C1

$$H_2C = CH - C1$$

5.3.3 Margaret area ? **=>**